

March 22 - March 28, 2002

The Terra spacecraft is in nominal mode. All instruments are back in Science Mode. Terra is completing recovery from the safe hold incident that occurred following the fifth Inclination Adjust Maneuver on March 19, 2002.

CERES and MISR were returned to science mode late in the day on March 20. The MODIS Space View Door was opened, and the opening of the Nadir Aperture Door and transition to full science mode was planned to be executed when temperatures reached proper values. ASTER and MOPITT were brought back on-line on March 25 and 26, respectively.

The team encountered difficulty bringing the MODIS instrument back on-line as a result of reset issues with the A-side Data Formatter. During attempts to load required software patches to the Formatter on March 26 and 27, the MODIS Control Processor was unable to maintain a solid serial link with the Formatter.

On the afternoon of March 27, a short period of stability was achieved during which loading of formatter patches was successful. However, toward the end of the event the Formatter reset, thus discarding the memory load patches. As the Formatter temperature continued to rise during the evening of March 27, the formatter was successfully loaded at 00:34 GMT. Stable communication was established with the Formatter, and the blackbody calibrator was set to 290K at one-third duty cycle. The MODIS Science Team used this opportunity to perform calibrations with the Nadir Aperture Door closed.

The MODIS instrument has been returned to working Science Mode. Commands to open the Nadir Aperture Door were issued during a Tracking and Data Relay Satellite System (TDRSS) contact at approximately 22:53 GMT on March 28. Visual confirmation of the door opening was obtained today.

The team will work concepts for loading of Formatter patches from EEPROM on MODIS to minimize the likelihood of such problems in the future. Additionally, the Terra spacecraft safe hold response will be revisited from a standpoint of the commands issued to MODIS.

The sixth and last of the current planned Inclination Adjust Maneuvers originally scheduled for April 2 will be postponed to allow the team to focus on the MODIS work and to review and modify current procedures for spacecraft mode transitions and instrument commands issued while transitioning to safe hold. There will be no MODIS roll maneuver in April as a result of the fact that the lunar geometry would require a roll angle greater than the maximum allowed by the mission rules.

Terra Plans:

 Fourth Terra-based Aqua Ground Network Science Data Loading Test from April 8-10

